

# **Hearing Panel Report**

*Based on a Public Hearing Held On  
April 11, 2016*

Addressing the Class 4b Pricing Formula  
Contained in the  
Stabilization and Marketing Plans  
for Market Milk for the  
Northern and Southern California Marketing Areas

## Hearing Panel Report

### Addressing the Class 4b Pricing Formula Based Upon a Public Hearing Held on April 11, 2016

This Report of the Hearing Panel regarding proposed amendments to the Stabilization and Marketing Plans for Market Milk for Northern California and Southern California (Plans) is based on evidence received and entered into the Department of Food and Agriculture's hearing record. The evidence includes the Departmental exhibits, written statements and comments received from interested parties, written and oral testimony received at a public hearing held on April 11, 2016, and written post-hearing briefs.

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## INTRODUCTION/WITNESSES

California Food and Agricultural Code (Code) Section 61801, *et sec.*, provides the authority, procedures, and standards for establishing minimum prices by the California Department of Food and Agriculture (Department) for the various classes of milk that handlers must pay for milk purchased from producers. These statutes provide for the formulation and adoption of Stabilization and Marketing Plans for Market Milk.

Two alternative proposals were submitted by:

1. Dairy Institute of California (Institute)
2. California Dairy Campaign (CDC), Milk Producers Council (MPC), and Western United Dairymen (WUD)

In addition to the Department's witness, a total of 23 witnesses testified on behalf of 23 organizations:

CDFA, Mike Francesconi  
Dairy Institute of CA, Bill Schiek, Patrick Fish\*  
CDC/MPC/WUD, Annie AcMoody, Lynne McBride, Rob Vandenheuvel\*  
BESTWHEY, LLC, Barry Murphy  
California Dairies Inc. (CDI), Eric Erba\*  
Joseph Gallo Farms (Gallo), Joe E. Paris  
Alouette Cheese, Edward Eddinger\*  
Saputo Cheese USA Inc. (Saputo), Greg Dryer\*  
Dairy Farmers of America, Inc. (DFA), Elvin Hollon\*  
Pacific Gold Creamery, Leonard Vandenburg  
Hilmar Cheese Company, Inc. (Hilmar), James De Jong\*  
CDC, Lynne McBride\*  
Cacique, Inc. (Cacique), Mac Moore  
Land O'Lakes, Inc. (LOL), Pete Garbani\*  
Rizo Lopez Foods Inc., Joe E. Paris  
Farmdale Creamery, Inc. (Farmdale), Scott Hofferber  
Leprino Foods Company (Leprino), Sue Taylor\*  
MPC, Rob Vandenheuvel\*

Special 3-Minute Testimony Given:

Eden Vale Dairy, Eileen De Raadt  
Deniz Dairy, Lucas Deniz  
Cal-Denier Dairy, LLC, Richard Denier  
T-Bar Dairy, Tom Barcellos  
Agricultural Council of California (Ag Council), Emily Rooney\*  
Dairy Producer, Peter Verburg

\* Indicates submission of a Post Hearing Brief.

## THE ALTERNATIVE PROPOSALS

### Institute

Replace the permanent whey scale found in Article III, Section 300, subparagraph (E)(1)(c) of the Plans with the following scale, corresponding to the monthly average whey protein concentrate 34% (WPC34) price as published in the United States Department of Agriculture's Dairy Market News (DMN):

<b>Monthly Average WPC34 Price (\$/lb.)</b>	<b>Whey Factor Value (\$/cwt.)</b>
< \$1.00	\$0.2500
≥ \$1.00 and < \$1.05	\$0.3533
≥ \$1.05 and < \$1.10	\$0.4579
≥ \$1.10 and < \$1.15	\$0.5626
≥ \$1.15 and < \$1.20	\$0.6673
≥ \$1.20 and < \$1.25	\$0.7720
≥ \$1.25 and < \$1.30	\$0.8766
≥ \$1.30 and < \$1.35	\$0.9813
≥ \$1.35 and < \$1.40	\$1.0860
≥ \$1.40 and < \$1.45	\$1.1907
≥ \$1.45 and < \$1.50	\$1.2953
≥ \$1.50 and < \$1.55	\$1.4000
≥ \$1.55	\$1.5000

**CDC/MPC/WUD**

Replace the permanent whey scale found in Article III, Section 300, subparagraph (E)(1)(c) of the Plans with the following scale:

Average Western Monthly Dry Whey per lb		Whey Value per cwt	
Less than \$0.2000		\$0.0000	
\$0.2000	to	\$0.2099	\$0.0360
\$0.2100	to	\$0.2199	\$0.0968
\$0.2200	to	\$0.2299	\$0.1575
\$0.2300	to	\$0.2399	\$0.2183
\$0.2400	to	\$0.2499	\$0.2791
\$0.2500	to	\$0.2599	\$0.3398
\$0.2600	to	\$0.2699	\$0.4006
\$0.2700	to	\$0.2799	\$0.4614
\$0.2800	to	\$0.2899	\$0.5222
\$0.2900	to	\$0.2999	\$0.5829
\$0.3000	to	\$0.3099	\$0.6437
\$0.3100	to	\$0.3199	\$0.7045
\$0.3200	to	\$0.3299	\$0.7652
\$0.3300	to	\$0.3399	\$0.8260
\$0.3400	to	\$0.3499	\$0.8868
\$0.3500	to	\$0.3599	\$0.9475
\$0.3600	to	\$0.3699	\$1.0083
\$0.3700	to	\$0.3799	\$1.0691
\$0.3800	to	\$0.3899	\$1.1299
\$0.3900	to	\$0.3999	\$1.1906
\$0.4000	to	\$0.4099	\$1.2514
\$0.4100	to	\$0.4199	\$1.3122
\$0.4200	to	\$0.4299	\$1.3729
\$0.4300	to	\$0.4399	\$1.4337
\$0.4400	to	\$0.4499	\$1.4945
\$0.4500	to	\$0.4599	\$1.5552
\$0.4600	to	\$0.4699	\$1.6160
\$0.4700	to	\$0.4799	\$1.6768
\$0.4800	to	\$0.4899	\$1.7376
\$0.4900	to	\$0.4999	\$1.7983
\$0.5000	to	\$0.5099	\$1.8591
\$0.5100	to	\$0.5199	\$1.9199
\$0.5200	to	\$0.5299	\$1.9806

Average Western Monthly Dry Whey per lb		Whey Value per cwt	
\$0.5300	to	\$0.5399	\$2.0414
\$0.5400	to	\$0.5499	\$2.1022
\$0.5500	to	\$0.5599	\$2.1629
\$0.5600	to	\$0.5699	\$2.2237
\$0.5700	to	\$0.5799	\$2.2845
\$0.5800	to	\$0.5899	\$2.3453
\$0.5900	to	\$0.5999	\$2.4060
\$0.6000	to	\$0.6099	\$2.4668
\$0.6100	to	\$0.6199	\$2.5276
\$0.6200	to	\$0.6299	\$2.5883
\$0.6300	to	\$0.6399	\$2.6491
\$0.6400	to	\$0.6499	\$2.7099
\$0.6500	to	\$0.6599	\$2.7706
\$0.6600	to	\$0.6699	\$2.8314
\$0.6700	to	\$0.6799	\$2.8922
\$0.6800	to	\$0.6899	\$2.9530
\$0.6900	to	\$0.6999	\$3.0137
\$0.7000	to	\$0.7099	\$3.0745
\$0.7100	to	\$0.7199	\$3.1353
\$0.7200	to	\$0.7299	\$3.1960
\$0.7300	to	\$0.7399	\$3.2568
\$0.7400	to	\$0.7499	\$3.3176
\$0.7500	to	\$0.7599	\$3.3783
\$0.7600	to	\$0.7699	\$3.4391
\$0.7700	to	\$0.7799	\$3.4999
\$0.7800	to	\$0.7899	\$3.5607
\$0.7900	to	\$0.7999	\$3.6214
\$0.8000	to	\$0.8099	\$3.6822
\$0.8100	to	\$0.8199	\$3.7430
\$0.8200	to	\$0.8299	\$3.8037
\$0.8300	to	\$0.8399	\$3.8645
\$0.8400	to	\$0.8499	\$3.9253
\$0.8500	to	\$0.8599	\$3.9860
More than \$0.86		\$4.0000	

**ESTIMATED IMPACTS OF THE ALTERNATIVE PROPOSALS  
ON CALIFORNIA CLASS AND POOL PRICES**

The table below shows the impacts of the proposed amendments on Class 4b and Pool prices relative to current prices (using the permanent whey scale) from March 2011 through February 2016. The analysis assumes that the alternative proposals and current formulas were in effect throughout the entire period. When a change is a "plus," the proposal would have increased the price and when a change is a "minus," the proposal would have decreased the price.

**Table 1 - Estimates of Proposals less Current Class 4b and Pool Prices**  
12-Month Averages: March-February and 5-Year Averages: March 2011 - February 2016  
*(Dollars per Hundredweight)*

<b>CLASS 4b PRICES</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>5-Year Average</b>
Institute	\$0.59	\$0.17	\$0.47	\$0.45	-\$0.11	\$0.31
CDC/MPC/WUD	\$1.66	\$1.51	\$1.61	\$1.75	\$0.38	\$1.38
<b>POOL PRICES: QUOTA &amp; OVERBASE</b>						
Institute	\$0.27	\$0.08	\$0.22	\$0.21	-\$0.05	\$0.14
CDC/MPC/WUD	\$0.75	\$0.69	\$0.75	\$0.83	\$0.18	\$0.64

**Please Note: Historic prices are not necessarily a good predictor of future prices.**

## SUMMARY AND IMPACT OF THE ALTERNATIVE PROPOSALS

There were two alternative proposals presented at the current hearing to amend the whey factor in the Class 4b pricing formula. The first alternative proposal, representing processor interests, was submitted by the Institute. The second alternative proposal, representing producer interests, was submitted by CDC, MPC, and WUD. (See pages 4 and 5 for specifics of these proposals)

The processor proposal would replace the current dry whey sliding scale with a scale based on the price of WPC34, as reported by the DMN. This proposed dry whey sliding scale was similar to the scale submitted at the June 3, 2015 hearing, albeit with slightly modified steps and values. Their proposed scale introduces five-cent steps for the WPC34 price and establishes corresponding whey factor values for each step. The scale imposes a floor of \$0.25/cwt. on the whey value incorporated into the pricing formula when the WPC34 price is less than \$1.00/lb. and caps the whey value at \$1.50/cwt. when the WPC34 price is \$1.55/lb. or higher. This proposal consists of 13 steps and would increase the number of steps compared to the permanent whey scale, which consists of nine steps.

The producer proposal would replace the current dry whey sliding scale with a scale that closely models the values resulting from the variable whey factor in the federal order Class III pricing formula. Their proposed scale is exactly the same as the one submitted at the June 3, 2015 hearing. The scale introduces 68, one-cent steps for the dry whey commodity price and establishes corresponding whey factor values for each step. The scale imposes a floor of \$0.00/cwt. on the whey value incorporated into the pricing formula when the DMN dry whey commodity price is less than \$0.20/lb. and caps the whey value at \$4.00/cwt. when the dry whey commodity price is \$0.86/lb. or higher.

### Impact of Proposals

To estimate the impact to the Class 4b and California Pool prices, the Department analyzed the two proposals assuming that the proposals had been in effect from March 2011 through February 2016. The producer proposal would have resulted in a five-year monthly average increase of \$1.38/cwt. in the Class 4b price and a \$0.64/cwt. increase in the Pool prices. The processor proposal would have resulted in a five-year monthly average increase of \$0.31/cwt. in the Class 4b price and an increase of \$0.14/cwt. in the Pool prices. The estimated annual and five-year average price impacts to the current Class 4b and Pool prices are summarized in "*Table 1 – Estimate of Proposals less Current Class 4b and Pool Prices*" found on page 6 of this Panel Report.

## INTRODUCTION

As result of a public hearing held on June 3, 2015, the Department implemented temporary adjustments to the dry whey scale found in the Class 4b pricing formula. These adjustments became effective on August 1, 2015, and are set to expire on July 31, 2016. In order to appropriately evaluate the temporary changes made to the whey value of the Class 4b pricing formula last year, in the context of the current market conditions impacting the production of milk and the marketing of dairy products, the Department called a subsequent hearing on its own motion, which took place on April 11, 2016. Specifically, the call of this hearing was to consider extending the effective date of the temporary<sup>1</sup> dry whey scale or making further adjustments to the temporary or permanent<sup>2</sup> dry whey scales found in the Class 4b pricing formula.

This hearing marks the seventh hearing held by the Department over the last five years to consider modifications to the Class 4b pricing formula, which is used to establish the regulated price of farm milk utilized for manufacturing cheese and whey products. As evidenced in these hearings, the Department faces multiple challenges when considering changes to the Class 4b pricing formula. First, limitations exist regarding the availability of California-specific manufacturing cost data for dry whey and Cheddar cheese due to confidentiality protocol. Without fully transparent data, it is problematic for the Department to modify specific portions of the Class 4b pricing formula. Second, producers and processors are affected differently by changes in the Class 4b price, because they are on opposite ends of the financial transaction of the sale of farm milk. Specifically, when the Class 4b price increases, producer margins rise and cheese processor margins decline. On the other hand, when the Class 4b price decreases, producer margins decline and cheese processor margins rise. Thus, it is difficult to balance the needs of producers and processors when considering modifications to the Class 4b pricing formula. These issues and others have been, and continue to be, at the forefront of Class 4b pricing hearings.

Similar to previous Class 4b pricing hearings, the April 11, 2016 hearing record contained opposing testimony and evidence regarding the appropriate level of the Class 4b price. Witnesses testifying in support of the producer proposal advocated for increasing the Class 4b price to attain greater equity with producers operating within a Federal Milk Marketing Order (FMMO). Specifically, these witnesses desired to achieve a closer relationship between the California Class 4b price and the FMMO Class III price, which is the price paid by regulated handlers for farm milk used in making cheese and whey products in areas of the U.S. regulated by the United States Department of Agriculture (USDA). Witnesses testifying in support of the processor proposal argued for maintaining the Class 4b price at a level where the state's cheese processors can remain competitive on a national level, and highlighted the need to amend the Class 4b pricing formula to better reflect the value of whey to diverse cheese processing plants in the state. Specifically, these witnesses supported replacing the whey scale based on the dry whey price, currently used as an input into the Class 4b pricing formula, with a whey scale based on the price series for WPC34, derived from the weekly WPC34 price published by DMN for the Central and West region. Additionally, other witnesses who testified at the hearing did not support either proposal, but

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<sup>1</sup> The term "temporary" dry whey scale used throughout this Panel Report refers to the table in Article III, Section 300, subparagraph (E)(1)(c)(i) of the Plans, effective for the period of August 1, 2015 to July 31, 2016.

<sup>2</sup> The term "permanent" dry whey scale used throughout this Panel Report refers to the table in Article III, Section 300, subparagraph (E)(1)(c) of the Plans, effective prior to August 1, 2015 and after July 31, 2016, pending no further amendments to the Plans.

rather preferred reverting back to the permanent dry whey scale or extending the temporary dry whey scale.

In all, 23 dairy industry organization and business entities provided oral and/or written testimony and evidence for this hearing. Of these participants, 12 supported adoption of the producer proposal, six supported adoption of the processor proposal, four supported making no changes to the Class 4b pricing formula (returning to the permanent whey scale on August 1, 2016), and one supported extending the temporary whey scale for an additional 12 months. Those supporting the producer proposal consisted of producer trade associations, producer-owned cooperatives, individual dairy operations, and an organization representing California farmers. Those supporting the processor proposal consisted of a trade association representing processors, proprietary cheese processors, and a whey processing consultant. Those supporting no change and the entity supporting extension of the temporary whey scale were all proprietary cheese processors.

Both the producer proposal and the processor proposal, if adopted as submitted, would lead to an increase in the Class 4b price. However, the magnitude by which the Class 4b price would increase differs significantly between the two proposals. When considering the appropriate level of the Class 4b price, the Secretary must take into consideration various relevant factors; such as, those cited in the *“Economic Considerations of the Proposed Changes to the Pricing Formulas”* (see Appendix A), relevant Code sections, relevant economic factors, analysis, public and Department information, and testimony and evidence contained in the hearing record. These important considerations are discussed within the following sections of this Panel Report, which examine: how to determine the whey factor; whether to increase the Class 4b price, relative to the permanent whey scale; the appropriate level of an increase to the Class 4b price to balance the impact to producers and processors; and whether an increase to the Class 4b price should be permanent or temporary. While the market conditions have changed since the June 3, 2015 hearing, as discussed in subsequent sections of the Panel Report, the underlying issues surrounding the whey factor in the Class 4b pricing formula remain the same. As a result, this Panel Report will reference several portions of the Panel Report from the June 3, 2015 hearing.

## DETERMINING THE WHEY FACTOR

### Issue

Since 2003, the Department has made modifications to the Class 4b pricing formula, resulting from hearings to consider adjustments to the whey factor. These hearings have illustrated the difficulties faced by the Department with establishing a whey factor that balances the differing needs of industry stakeholders, while meeting statutory directives to promote the orderly marketing of milk and dairy products. Many of the same difficulties and concerns that faced the Department in previous hearings are of importance in the hearing in question.

In order to establish a whey factor value that meets the needs of both producers and processors, the Department has endeavored to use the best objective information and data available to connect the value of whey with the relevant economic factors and conditions specific to the California dairy industry. However, certain issues related to the whey factor consistently create difficulties and challenges in valuing whey, including: limitations of data directly relatable to the actual manufacturing and marketing conditions of California's diverse cheese manufacturers; lack of transparent, California-specific data related to the product prices, yields, and manufacturing costs of whey products; and data that the Department cannot publish due to confidentiality. Similar to the June 3, 2015 hearing held to evaluate the whey factor, the processor proposal suggested changing the commodity price used in the whey scale from dry whey to WPC34 in order to overcome the consistent issues related to the whey factor. A review of this proposed methodology, compared with the current one, is warranted in order to determine how best to objectively modify the current whey factor.

### Data Related to California Manufacturing and Marketing Conditions

One ongoing concern related to the whey factor, and class pricing formulas in general, is whether the components of the pricing formula relate well to the actual manufacturing processes that occur in California manufacturing plants and the marketing conditions of California dairy products. Milk prices can be commensurate with the value of dairy products when the pricing formulas directly relate to the actual manufacturing conditions observed in California manufacturing plants. Previous hearing records showed that the Department has expressed concern about how well a whey factor based on dry whey relates to the actual manufacturing and marketing conditions of California dairy products. Similar to the June 3, 2015 hearing, the Panel continues to believe that basing the whey factor on WPC34 could potentially improve how the whey factor relates to some, but not all, of California cheese processors.

Since its inclusion in the Class 4b pricing formula in 2003, dry whey has served as the commodity price used to determine the whey factor. However, of the 59 California plants making cheese at the beginning of 2016, only two plants make dry whey. One plant has consistently made dry whey over the course of several years, while the other plant has made dry whey in irregular cycles. Because so few California plants make dry whey, a whey factor based on dry whey does not appear to accurately represent the manufacturing conditions of most California cheese plants.

On the other hand, there are 10 California plants that have the ability to manufacture WPC ranging from 25.0 percent to 89.9 percent protein content. The hearing record indicated that the marketing and pricing of WPC of the higher protein contents are more relatable to those of WPC34 than dry whey. As a group, these 10 plants represented 71.4 percent of

California's total cheese production in 2015. Moreover, this group of plants accounted for 95.7 percent of California's Cheddar cheese production and 69.9 percent of the state's Mozzarella production in the same year. Additionally, hearing testimony indicated that there continues to be some California plants that concentrate their wet whey stream and derive revenue from selling the concentrated wet whey stream at a price based on the WPC34 price, although at a reduce price. Therefore, it appears that a whey factor based on WPC34 would relate better to the manufacturing and marketing conditions of more California cheese plants than dry whey.

Although a whey factor based on WPC34 would relate better to some California cheese plants, the Panel has a few concerns regarding the implementation of such a whey factor. First, it may not relate well to all California cheese plants, since the majority of California cheese plants do not recover a value-added product from their whey stream. While, some plants continue to sell their wet whey stream for the purpose of animal feed, which may result in some net revenue, others simply incur a cost to dispose of their whey steam without receiving any revenue in return. Testimony indicated that cheese plants operating under these circumstances would likely be financially stressed by the assumed whey value of any whey factor, regardless if it is based on dry whey or WPC34. While the hearing record showed that some California cheese processors supported the concept of a whey factor based on WPC34, other cheese processors did not support it or any other changes to the whey factor because any whey valuation methodology would not relate well to cheese plants that recover little or no value from their whey stream.

Second, a whey factor based on WPC34 may not track well with a whey factor based on dry whey when comparing cheese-milk prices paid by California's out-of-state competitors with California prices. Analysis submitted at the hearing shows the WPC34 and dry whey prices tend to trend up and down together; however, there are occurrences when the two price series can deviate from each other. A comparison of the per pound protein price of WPC34 with that of dry whey shows that their price movements are highly correlated, but not perfectly correlated. This indicates that there may be occasions when a whey factor based on WPC34 may move differently than a whey factor based on dry whey. Therefore, California cheese processors could face a competitive disadvantage if California milk prices were rising at a time when milk prices outside California were decreasing.

### **California-Specific Product Price, Yield, and Manufacturing Cost Data**

When first incorporated into the Class 4b pricing formula, the whey factor followed the typical end-product pricing construct consisting of: a product price, minus a manufacturing cost allowance, multiplied by a yield factor. In order to service the whey factor, the Department performed annual manufacturing cost studies that detailed the actual manufacturing conditions observed in California plants participating in the studies. Because these cost studies contained the most current data available regarding the actual manufacturing costs and yields observed in California plants, they served as an effective basis for maintaining the whey factor.

By 2007, the number of California plants manufacturing dry whey decreased to two. As a result, the Department was unable to continue performing and releasing the dry whey manufacturing cost study data because of confidentiality rules regarding the public disclosure of proprietary data. Without dry whey manufacturing cost studies, it has been difficult for the Department to service the whey factor because verifiable, California-specific data, representative of California plants has not been available. Records from previous hearings

illustrated the difficulties that have confronted the Department as it has serviced the whey factor by modifying the construct and values generated by the whey scale.

In order to overcome difficulties of not having access to California-specific data, the Institute proposal uses certain processing and transportation costs, obtained through their own research of industry plants and the WPC34 price, to construct its proposed whey factor. Although this approach appears to have merit, the Panel continues to have some concerns that need to be addressed or vetted prior to implementing such a whey factor. First, the Department should confirm and verify that any explicit or implied manufacturing cost allowance and yield factor incorporated into the whey factor is representative of California plants. The Panel suggests that the Department or another third party group perform a cost study to verify the veracity of any proposed parameters that would ultimately be incorporated into a new whey factor. Such a cost study would validate the accuracy and effectiveness of the proposed new methodology.

Second, an examination is warranted of the proposed DMN WPC34 price series to determine if it would function well as a commodity price series for California plants. This price series is based on the Western and Central regions of the U.S. Although various witnesses supported this concept, it is prudent to verify if this price series is representative of the prices received by California plants from their whey stream. If the DMN WPC34 price series is validated as representative of the actual prices received by California plants, then this concern would be resolved. If not, other alternatives, such as a California price survey or other price discovery method, would need to be considered.

### **Confidential Data Issues**

Over time, the California dairy industry has consolidated in both the milk production and the dairy product manufacturing sectors. While the number of manufacturing facilities has been decreasing, the size of manufacturing facilities in California has been increasing. As a result of consolidation, statistical data regarding manufactured dairy products and manufacturing costs, which were historically published for public use, must now be held confidential. Such data is held confidential when there are too few plants manufacturing certain dairy products or a dominant manufacturer represents a significant percentage of the state's total output for a particular product. It is also problematic for the Department to use such proprietary data in its decision making process.

The issue of data confidentiality continues to apply to the Class 4b pricing formula with Cheddar cheese and dry whey. Additionally, California data associated with WPC34 is presently confidential. In California, WPC product data is categorized into two groups by protein content, including WPC Low (protein content between 25.0 percent and 49.9 percent) and WPC High (protein content between 50.0 percent and 89.9 percent). In California, WPC Low data is confidential due to one dominant manufacturer, while WPC High data is not confidential at this time. In order to overcome the possible issue of data confidentiality, there would probably need to be a cost survey implemented that combines all the California plants making both WPC Low and WPC High, or some other methodology to overcome this issue. Further evaluation and input from industry stakeholders would be advisable to evaluate the best manner to set up such a cost study in order to gather pertinent data to appropriately construct the whey factor.

## **Panel Recommendation**

The whey factor has been challenging to administer since its inclusion in the Class 4b pricing formula in 2003, especially after 2007, when verifiable, objective data became limited due to confidentiality. There continues to be merit to the concept of establishing a whey factor based on WPC because it appears to be more representative of California manufacturing conditions than dry whey. However, the Panel believes that further industry discussion and input outside of the hearing process would be required in order to remedy the above-mentioned concerns with a whey factor based on WPC. Further discussion would need to take place regarding a new whey factor that values the wet whey stream instead of a finished dairy product, and the manner in which a new whey factor would adequately balance the needs of both producers and processors.

In addition, the Panel continues to be concerned with other portions of the Class 4b pricing formula that have been affected by data confidentiality and have not been adjusted since 2011. Testimony from various processor witnesses also highlighted their concerns with the lack of updates to the pricing formula since 2011. The Panel believes it would be problematic to update these other parts of the pricing formula due to data confidentiality. The industry and the Department should jointly pursue solutions to the issues affecting the whey factor and the other portions of the Class 4b pricing formula.

The Panel recommends continuing to use dry whey to establish the whey factor.

## INCREASING THE CLASS 4B PRICE

Except for the four proprietary cheese processors who supported no change to the Class 4b price, all other entities participating in the hearing process supported some level of increase to the Class 4b price. Using historic commodity prices to estimate the average impact to the Class 4b price over the past five years, entities testifying in support of the producer proposal sought an increase of \$1.38/cwt. to the Class 4b price, while entities testifying in support of the processor proposal favored an increase of \$0.31/cwt. to the Class 4b price. Additionally, the proprietary cheese processor testifying in support of continuing the temporary whey scale favored an increase of \$0.96/cwt. to the Class 4b price. In order to determine the appropriate level of an increase to the Class 4b price that balances the impact to producers and processors, several topics regarding milk production in the state must be addressed. The sections below discuss: margins on the dairy; the decreasing number of dairy farms in the state; current milk supplies; and the outlook for future milk production.

### Dairy Margins

Dairy producer margins (revenue received for farm milk less the cost of producing farm milk) are an important indicator when analyzing milk production in the state. Specifically, dairy margins provide insight into the current financial situation facing producers. Over time, dairy margins fluctuate and are cyclical in nature based on market conditions. *Figure 1* depicts dairy producer margins in California, by quarter, between 2007 and 2015. Data used to estimate the difference between the California mailbox milk price<sup>3</sup> and the California cost of production<sup>4</sup>, as displayed in the chart, was collected from dairies participating in the Department's Cost of Production Survey.

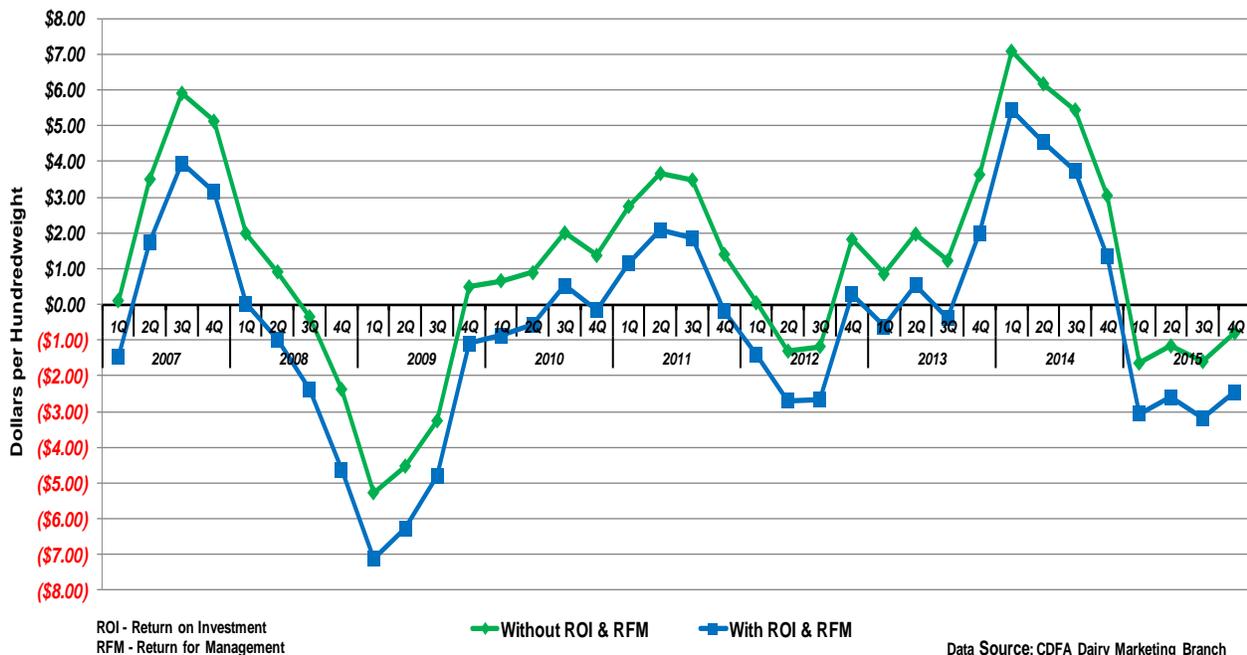
As seen in *Figure 1*, California dairy producers realized positive margins in 2007, followed by negative margins in 2008 and 2009, due to low milk prices in years of global economic recession. During the third quarter of 2007, dairy margins peaked at an estimated \$5.91/cwt., when including a return on investment and a return for management, and declined to an estimated -\$7.11/cwt. during the first quarter of 2009. In 2010 and 2011, dairy producers realized positive margins, but for most of 2012, dairy margins were negative again. During the second quarter of 2012, dairy producers in the state were losing an estimated \$2.68 for each one hundred pounds of milk produced, when including a return on investment and a return for management. The year 2013 showed both positive and negative dairy margins, followed by positive margins in 2014, due to high milk prices in years of strong global demand for dairy products. During the first quarter of 2014, dairy margins were estimated to be \$5.43/cwt., when including a return on investment and a return for management. Finally, for all of 2015, dairy margins once again shifted to being negative, at or slightly below levels seen in 2012. Although complete data for 2016 is not yet available, preliminary indications suggest that California dairy producers are still realizing, and will continue to realize, negative margins for at least the first half of the year.

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<sup>3</sup> The California mailbox milk price is calculated as the net of total receipts less marketing costs and assessments. Total receipts consist of gross revenue (pool payments), quality payments, component and yield premiums, bonuses, and monthly distribution of cooperative earnings. Marketing costs and assessments include haul and stop charges, cooperative dues, equity deductions, state and federal assessments, and lab fees. When calculating dairy producer margins, the mailbox milk price must be adjusted to include marketing and assessment costs, since they are also part of the cost of production.

<sup>4</sup> The California cost of production estimate includes feed costs, labor costs, herd replacement costs, operating costs, marketing costs, and allowances for return on investment and return for management.

**Figure 1: California Mailbox Price Less California Cost of Production**  
 Based on the California Cost of Production Survey, with Allowances  
 January 2007 through December 2015



Since dairy producer margins are influenced by external market conditions facing the dairy industry, they cannot be controlled completely by regulatory change to class pricing formulas. Although an adjustment to the Class 4b price would cause margins to move upward, it would not remedy the fluctuation in dairy margins that has been observed over time. Testimony and evidence from the hearing indicated that on a global level, the current supply of milk has been increasing, leading to high inventory levels, while the demand for dairy products has weakened, particularly in key export markets such as China and Russia. This global market imbalance will continue to place downward pressure on milk prices and dairy producer margins independent of an increase to the Class 4b price.

### Loss of Dairies

Over the past few decades, the number of dairies in California has continually declined, while the number of cows per dairy has continually increased. However, this trend of consolidation appears to have begun to level off in 2015, when the total number of dairies decreased by 32 and the average dairy size decreased by two head to 1,215 cows per dairy. Testimony presented at the hearing indicated that when dairies close in California today, in many cases, the cows do not remain in the state.

Besides industry consolidation to achieve greater economies of scale, several other factors have contributed to the loss of dairies in California. First, as mentioned above, California dairy producers have recently experienced multiple years of negative margins, particularly in 2008, 2009, and 2012. Collectively, these years have put financial pressure on producers, resulting in lost equity and even bankruptcies for some operations. Second, testimony indicated that some producers have chosen to relocate their dairies outside of California to take advantage of lower operating costs and less stringent environmental regulations. Third,

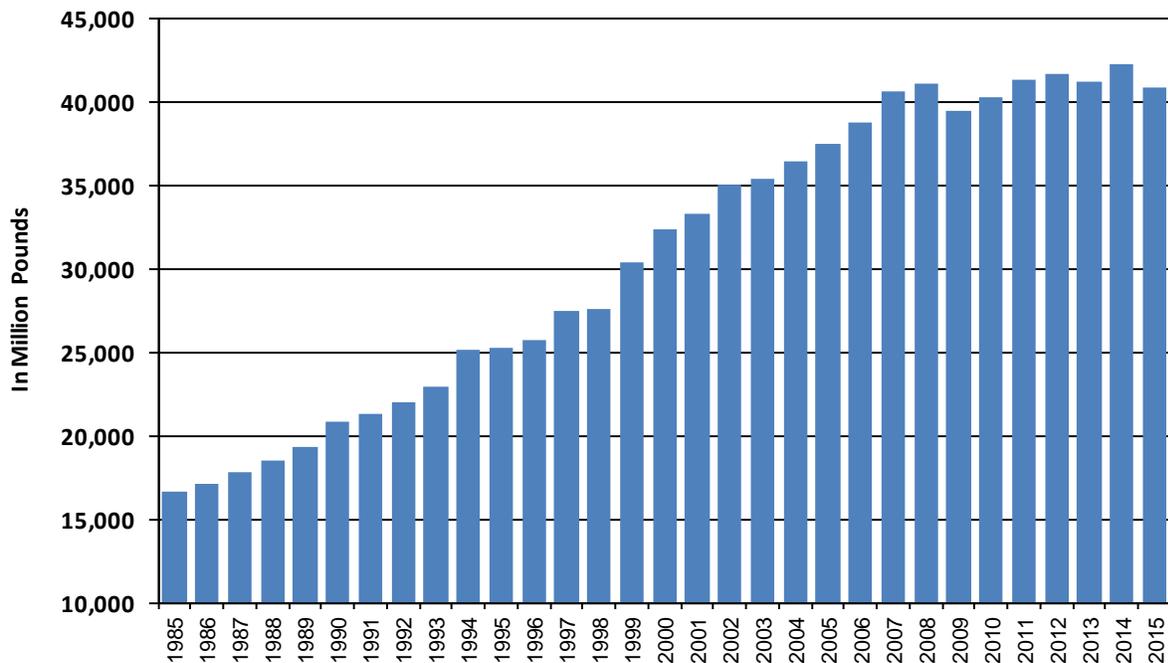
industry trade publications have cited retirement of the primary dairy operator as a factor that has contributed to the decline in the number of dairies in the state. According to the publication, high land values and respectable replacement cow and beef prices have made retirement an attractive option for dairy producers in the state. Lastly, testimony indicated that some dairies have been converted into farming operations with permanent crops, such as almonds.

During the hearing, multiple examples were cited of dairy operations that have gone out of business in 2016, suggesting that the declining trend in the number of dairies in California appears to be continuing. Although an increase to the Class 4b price would provide more revenue to producers, testimony indicated that it would likely not be able to reverse this trend, but rather only slow the number of exiting dairies. A decline in the number of dairies and cows in California has contributed to a reduction in the state's current milk supply, and may continue to have implications on future milk production in the state.

### Present and Future Milk Production

Despite consistent decreases in the number of dairies in California over time, the state's milk supply grew by an average of approximately 4 percent each year between 1985 and 2007. However, beginning in 2008, annual milk production in California has fluctuated both upward and downward, but has overall remained relatively flat around 41 billion pounds. In 2015, a total of 40.87 billion pounds of milk was produced in the state, which was down by 3.4 percent from the record production level of 42.31 billion pounds in 2014. *Figure 2* depicts total milk production in California over the last 31 years.

**Figure 2: California Milk Production, 1985-2015**



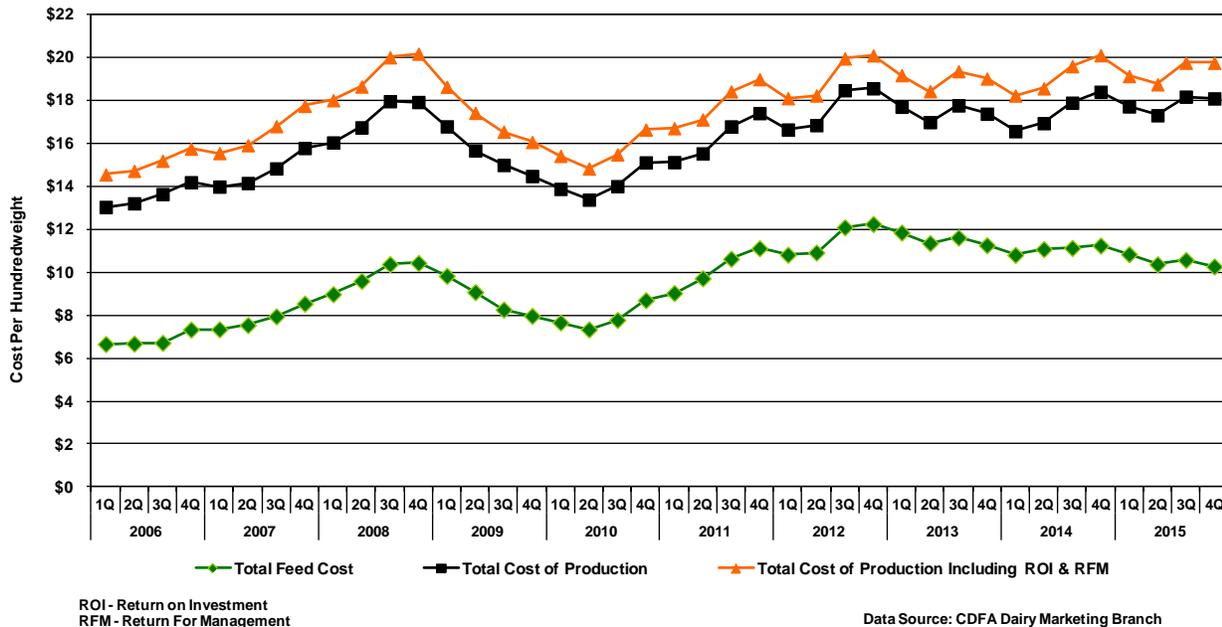
Source: CDFA Dairy Marketing Branch

During each of the first three months of 2016, milk production has continued to decline when compared to the same month in the previous year. Testimony and evidence from witnesses representing cooperatives who handle a bulk of the state's milk supply suggested that future milk production in California will likely continue to decline below 2015 levels. Besides low milk prices, which are currently being experienced by dairy producers across the nation and globally, several factors have collectively affected dairy operations in California, impacting the current milk supply and possibly threatening future milk supplies. These factors include feed costs, environmental regulations, labor rates, competition for land use, and ongoing drought.

### Feed Costs

Feed costs represent a significant portion of the total cost of producing milk on a dairy. According to data from the Department's Cost of Production Survey, the statewide average total feed cost in California has accounted for between 49.2 percent and 66.9 percent of the statewide average total cost of production over the last ten years. *Figure 3* shows how total feed cost and total cost of production have fluctuated during this time. Prior to the fourth quarter of 2007, the statewide average feed cost and the statewide average cost of production remained relatively stable, below \$8.00/cwt. and \$15.00/cwt., respectively. Between 2008 and 2010, the statewide average feed cost ranged between approximately \$8.00/cwt. and \$10.00/cwt., and the statewide average cost of production ranged between approximately \$14.00/cwt. and \$18.00/cwt. In 2011 and 2012, the statewide average feed cost accelerated, and reached a new peak of \$12.24/cwt. during the fourth quarter of 2012, and the statewide average cost of production peaked at \$18.55/cwt. during the same quarter. Over the past three years, the statewide average feed cost gradually declined overall, but still remained above \$10.00/cwt., while the statewide average cost of production fluctuated, but remained flat overall. During the fourth quarter of 2015, the statewide average feed cost was \$10.27/cwt., and the statewide average cost of production was \$18.08/cwt. While feed costs change based on market conditions, testimony and evidence indicated that they are likely to remain steady in the range above \$10.00/cwt. and not return to lower levels experienced prior to 2008.

**Figure 3: California Cost of Production, by Quarter**  
 Based on California Cost of Production Survey  
 January 2006 through December 2015



### Environmental Regulations

Compared to other states in the U.S., California has stringent environmental (air and water) regulations applying to dairy operations. In order for dairy producers to comply with these regulations, additional time and resources are needed, adding costs to run their operations. These added costs and restrictions have limited the ability for producers to expand and have contributed to the slowing trend in milk production. The trend towards more stringent environmental regulations will likely persist in the future, which will continue to impede milk production growth in the state.

### Labor Rates

Hired labor is another cost borne by dairy producers that has risen rapidly over the last four years and should increase in the future. According to data from the Department’s Cost of Production Survey, from 2008 through 2011, the statewide average cost for total hired labor fluctuated between \$14.25 per hour and \$14.92 per hour. However, most recently, the statewide average cost for total hired labor increased from \$14.73 per hour, during the third quarter of 2012, to \$16.73 per hour, during the fourth quarter of 2015. Additionally, testimony provided at the hearing highlighted recent legislation signed by Governor Jerry Brown to increase the minimum wage in California to \$15.00 per hour by 2022 through gradual increases, which may lead to further increases in the statewide average cost for total hired labor.

### Land Use Competition

Over the past several years, the value of many agricultural products, such as tree nuts and grapes, has increased. In turn, many farming entities have decided to produce these products in order to maximize the profitability of their land. As a result, the competition for land in

California's primary agricultural regions has increased, putting pressure on dairy operations. Testimony and evidence indicated that some dairy operations have been purchased and converted to permanent higher value crops, while other dairies have decided to diversify a portion of their land, previously used to grow feed crops for their herds, into similar higher value permanent crops. With less land devoted to dairy operations and feed crops, such as alfalfa hay and corn silage, the milk supply in the state appears to be negatively impacted.

### Drought

California is currently facing a fifth consecutive year of drought conditions, which began in 2012. Although the state received much needed snow and rainfall this winter, the drought continues to be designated as "extreme" and "exceptional" in much of the state, including the Central Valley, which is the origin of the majority of the state's milk supply. For dairies, drought has a direct effect on operations that produce all or a portion of their own feed for their herds. Testimony and evidence indicated that dairies impacted by drought have been forced to leave farmland fallow, plant fewer acres of alfalfa and corn, or plant more acres of sorghum. While corn and alfalfa have higher nutritional qualities for dairy cattle than sorghum, they require more water and are less tolerant to heat stress than sorghum. Conversely, while sorghum has lower nutritional qualities for dairy cattle than corn and alfalfa, it requires less water and is more tolerant to heat stress than corn and alfalfa. As a result, when less feed of higher nutritional value is grown locally by dairy operations, it must be sourced from more distant regions at an increased cost to the producer.

### **Panel Recommendation**

Dairy producers in California are currently operating in a period of negative margins, which will likely continue until the market environment for finished dairy products is able to improve. Over time, long periods of negative producer margins and other factors, including industry consolidation, relocation, retirement, and conversion into higher value agricultural crops, have resulted in a declining number of dairies in the state. Additionally, elevated feed costs, strict environmental regulations, rising labor costs, increased competition for agricultural land, and ongoing drought conditions have collectively put negative pressure on dairy producers in California, and have contributed to a flat milk supply trend in the state during the last eight years. However, over the last 15 months (January 2015 through March 2016) the milk supply has consistently declined by an average of 3.3 percent, when comparing each month to the same month in the previous year. The Panel believes the factors described above will continue to put negative pressure on milk production in the future. Further, it appears that the combined impact of these factors has changed the conditions affecting California's milk production to the point where the possibility of future growth has been replaced by a concern that the future milk supply may be threatened.

With diminishing volume, the market for farm milk in California appears to be beginning to move into a supply deficit situation, where processors' demand for milk exceeds producers' supply of milk. Testimony received at the hearing from two large cooperatives in the state indicated that they are processing less milk in their own manufacturing plants in order to fulfill contracts with outside processors. As supply continues to trend downward, excess manufacturing capacity may continue to grow and become concerning. Therefore, the Panel believes an increase to Class 4b price is warranted to slow the declining milk production trend in the state and ensure a continuous supply of milk is available for processing into dairy products. The level and duration of the increase to the Class 4b pricing formula is discussed in the following section, which examines: price alignment between the California Class 4b

and FMMO Class III pricing formulas; the impact of price increases to industry stakeholders; the magnitude of increase to the Class 4b price; and whether the price increase should be made on a permanent or temporary basis.

The Panel recommends increasing the Class 4b price.

## LEVEL AND DURATION OF ADJUSTMENT TO THE CLASS 4B PRICE

### Issue

It can be difficult to adjust the Class 4b pricing formula since producers and processors are on opposite ends of the sale of farm milk. As such, any change to the level of class prices will inevitably affect one side of the industry negatively, while positively affecting the other. Moreover, individual processing and dairy operations are impacted differently. Specifically, individual cheese processing operations are affected differently by Class 4b price changes depending on their size, efficiency, and investment in whey processing equipment. Dairy operations may also be impacted differently depending on whether they ship milk to a processor that pays premiums, which could be potentially reduced following a Class 4b price increase.

In order to determine an appropriate Class 4b price increase that balances the needs of both producers and processors, the Department must consider various relevant issues, while maintaining an adequate milk supply in relation to the demand for milk. The topics that will be examined in this section of this Panel Report are: the price alignment observed between the Class 4b price and the FMMO Class III price; the varied impact to dairy stakeholders from an increase in the Class 4b price; the appropriate level of price increase; and whether a price increase should be temporary or permanent. These topics have been consistently discussed at length in previous hearings, including the June 3, 2015 hearing. As a result, the testimony and discussion surrounding these topics in this Panel report are similar if not the same as the June 3, 2015 hearing.

### Price Alignment between the Class 4b and Class III Prices

Testimony from witnesses supporting the producer proposal emphasized the desire to better align the California Class 4b price with the FMMO Class III price. Historically, witnesses supporting producer interests have maintained that the Class 4b price should be set at a level close to, or equal to, the FMMO Class III price. They assert that Code Section 62062 provides an important legislative mandate for this argument. On the other hand, witnesses supporting processor interests have consistently argued that there are a number of economic factors that are important in the determining the appropriate level of the Class 4b price, not just the comparison between the Class 4b and FMMO Class III prices. Consistent with previous hearings, the Panel continues to believe that a number of factors should be considered when establishing an appropriate Class 4b price level, including the mandates contained in the Code, the difference between the California and federal order systems, and marketing conditions specific to California.

### The Code

For many years, witnesses supporting producer interests have asserted that Code Section 62062 provides the main directive when establishing the appropriate level of the Class 4b price. A portion of Section 62062 states that: "If the director adopts methods or formulas in the plan for designation of prices, the methods or formulas shall be reasonably calculated to result in prices that are in a reasonable and sound economic relationship with the national value of manufactured milk products." At the hearing in question, producer witnesses again stated that the FMMO Class III price is the best benchmark price for cheese milk sold across the U.S., making it synonymous with the national value of cheese milk sold for manufactured milk products. Accordingly, these witnesses suggested that establishing a Class 4b price

equal, or close to the FMMO Class III price, will create a reasonable and sound economic relationship as outlined in Section 62062.

The Panel continues to believe that Code Section 62062 provides the Secretary with an important directive to consider when setting milk prices, such as maintaining a reasonable and sound economic relationship with the national value of milk products. However, this section does not equate or relate the “national value of manufactured milk products” with any specific regulated or unregulated price series. Furthermore, there are other portions of Section 62062 and other Code sections that provide the Secretary with additional, important directives to take into account when setting prices, including relevant economic factors and mandates to ensure stability in the California marketplace for farm milk and dairy products. A further discussion of the many important directives found in the Code relating to establishing milk prices can be found in Appendix B. The Panel continues to believe all relevant factors should be considered when establishing milk prices in order to appropriately balance the opposing needs of industry stakeholders.

### Pricing Regulations in California and Federal Orders

The record for this hearing and previous hearings showed the differing opinions regarding whether a direct comparison between the Class 4b and FMMO Class III prices is appropriate. As previously stated, witnesses supporting producer interests generally argued that the FMMO Class III price serves as the basis for the pricing of cheese milk in both federal orders and unregulated areas of the U.S. Because of this, they argue that a direct comparison between the two prices is appropriate. Conversely, witnesses supporting processor interests generally argued that the ability for milk to escape minimum pricing regulations in federal orders, but not in California, creates a key difference in the two systems that make direct comparisons unsuitable.

One principle difference between the California and federal order systems is the flexibility under certain circumstances for Grade A milk used to make manufactured products (cultured and frozen dairy products, butter, dry milk powders, cheese, and whey products) to be sold below minimum regulated price in federal orders. Although it seems that much of the milk marketed in federal order areas is regulated and priced at least at the announced class price, there was evidence in the records of the current hearing and previous hearings indicating that some milk was marketed outside of the regulated system and below the minimum regulated price. Milk may be marketed outside of the regulated system when milk supplies exceed demand during the spring flush or weekends and holidays, under certain handler to handler transactions, or by non-Pool plants that regularly purchase milk below announced class prices. Although comprehensive data on the volumes and prices of such unregulated milk are not available to determine its impact on the market, the opportunity for this milk to escape the regulated market provides some flexibility in the marketing of milk in federal order areas.

While the federal order system provides circumstances that allow milk to be sold below announced class prices, California statutes do not. In California, all Grade A milk must be sold at least at the regulated minimum class price, regardless of whether the milk is sold to a pool plant or not. There is no flexibility in the California system that allows for California Grade A milk to be sold below the minimum class price, even when conditions exist that would cause milk to be sold below the announced class price in areas covered by federal orders. Since there are quantities of milk purchased below announced class prices in federal orders under circumstances not permitted in the California system, a strict comparison of the Class 4b and FMMO Class III prices is not appropriate. Although the relationship between the

two prices can serve as a starting point when determining the appropriate level of the Class 4b price, the Panel continues to believe that the two prices should not be set equal to each other. Besides the differences in the California and federal order systems regarding how milk is marketed, there are other key marketing conditions affecting California, which are discussed in the next section, that also make strict price alignment inappropriate.

### California Marketing Conditions

Over the past few decades, California has grown to become the largest milk producing state in the U.S., with approximately 80 percent of its milk supply utilized in the production of Class 4a and 4b manufactured products. Because the quantity of these products exceeds the demand for such products within the state's borders, California markets a significant amount of manufactured dairy products in both U.S. and international markets. Since California manufactures and markets a large quantity of dairy products outside of California in distant markets, several important economic factors need to be examined when setting milk prices. Two important factors that warrant examination are the state's plant capacity and the marketing conditions affecting the sale of products outside the state.

As California milk production steadily grew over the course of decades, new manufacturing plants were built in order to process the growing supply. Because the growth in new manufacturing capacity did not always match the growth in milk production, there have been time periods when the milk supply exceeded plant capacity. Previous hearing records showed there have been periodic concerns with plant capacity as recently as 2011 and 2012. When the state's milk supply exceeds plant capacity, disorderly marketing conditions can occur that negatively affect the industry. As a result, the balance between California's milk supplies and plant capacity has been a repeated issue evaluated during previous hearings.

Department data and the hearing record indicated there is sufficient plant capacity available to process the current milk supply. Hearing testimony indicated that as California milk production has declined, the state's producer cooperatives have processed less milk in their Class 4a plants to ensure their proprietary customers have received their contracted milk supplies. Department data corroborate this trend. Coupled with the indication that the state's milk supply may continue its declining trend, it is probable that plant capacity will not be an issue in the near future. However, if milk production continues to decline and becomes threatened due to the combination of issues affecting California milk production, disorderly marketing conditions associated with chronically short milk supplies could arise. Although the hearing record indicated that is not the current case, the Panel believes that the milk supply in relation to processing capacity should be continually evaluated.

Besides plant capacity, another important factor to consider in milk pricing is the location of the markets where California-made dairy products are sold. Because large quantities of California dairy products leave the state to be marketed in domestic and global markets, California manufacturers must be able to compete with other manufacturers for buyers in these markets. Transportation costs incurred to ship product to the market is one essential factor that influences the competition for buyers in markets. Since California is situated on the West Coast, it is reasonable to assume that California has a shipping advantage with regards to exporting product globally, especially west. However, California has a disadvantage shipping product to the Midwest and the East Coast because domestic competitors, located east of California, are closer to these markets. Although precise data is not available to determine the relative shares of California dairy products being shipped to different locations, both inside and outside of the U.S., hearing testimony indicated that significant quantities of

products do move eastward from California, costing upwards of \$1.00/cwt. to \$1.50/cwt to ship such product. All else being equal, economic theory suggests that milk has a value based on location. Milk utilized in dairy products marketed eastward from California would require a relatively lower price than milk utilized in dairy products by competitors situated closer to the market to compensate for higher presumed shipping costs. Because of this, it would be reasonable to expect milk prices in California to be somewhat lower than other areas of the U.S., making strict price comparisons between California and other areas of the U.S. inappropriate.

### **Impact of Price Increase to Industry Stakeholders**

Any adjustment to the level of the Class 4b price would directly impact both producers and processors. In general, an increase in the Class 4b price would generate an increase in Pool prices and producer income. On the contrary, an increase in the Class 4b price would generally reduce margins received by cheese processors due to higher milk procurement costs, which represents the largest portion of the total cost to produce cheese. Even though an increase in the Class 4b price leads to these predictable outcomes, the impact of the increase would vary to different dairy stakeholders.

For cheese processors, the ability to adjust to an increase in the Class 4b price appears to be dependent on certain factors, such as size, efficiency, and whey processing investments of each individual operation. The hearing record showed that cheese processors can be segmented based on these factors. There continues to be a small group of large cheese processors in the state that have invested in whey processing equipment to manufacture value-added, dried whey products. It is feasible that these large processors would be better able to adjust to reasonable price increases because of the efficiencies and economies of scale associated with larger operations.

However, there are a few smaller-scale cheese processors that have also invested in equipment to process their whey stream and manufacture value-added, dried whey products. Testimony indicated that these smaller processors may not be receiving a return on their whey processing investment because they may not have the size and scale necessary to fully benefit from such an investment. Furthermore, testimony indicated that these plants may not receive the full benefit from manufacturing a WPC or isolate product because of the lack of ability to adequately process the lactose (carbohydrate) stream associated with WPC and isolates production. These issues suggest that an increase in the Class 4b price would impact these smaller processors to a greater degree than large processors.

Two final types of cheese processors that would be affected by a price increase are those that have invested in equipment to concentrate their whey stream for sale and those that do not process their whey stream in any manner. Those who concentrate their whey stream may receive some revenue from its sale, but this revenue is much less than the revenue received from the sale of a finished, dried whey product. Those who do not process their whey stream often dispose of it at a cost, without receiving any revenue for it. Similar to previous hearings, testimony suggested that a price increase, in any magnitude, would negatively impact these types of cheese processors the most.

The Panel recognizes that cheese processors continue to be impacted differently by increases in the Class 4b price. Although specific financial data from cheese processors are not available to precisely estimate the impact of price increases, it is probable that each processing operation is impacted in some magnitude based on economic theory. Because it

is difficult to predict the impact to cheese processors with precision, the Panel cannot forecast the impact that price increases will have to the amount of milk cheese processors will procure in the future, or how any change in milk procurement will affect the important balance between the state's future milk supplies and plant capacity. However, the Department and the industry should continue to evaluate this balance in the future.

In the end, balancing the needs of producers and processors with Class 4b price adjustments is difficult. This is due in part to the varied impacts to stakeholders and the difficulties in predicting how price adjustments will affect the milk supply and plant capacity balance. Similar to past hearings, the Panel continues to believe that updates to the structure of the class pricing formulas, and possibly the state's pricing system, could potentially alleviate some of these issues with milk pricing. Until structural changes are made to the pricing formulas or the pricing system, the same issues observed in the present and past will likely continue in the future.

### **Level of Price Increase – Modification to the Whey Scale**

As outlined in *The Alternative Proposals* section of this Panel Report, there were two different proposals submitted that would increase the Class 4b price. Each alternative proposal suggested replacing the permanent dry whey scale with a new proposed whey scale. The producer proposal is exactly the same as the producer proposal that was presented at the June 3, 2015 hearing. The processor proposal is very similar to the processor proposal presented at the June 3, 2015 hearing, with a few slight modifications to the steps and their corresponding whey values.

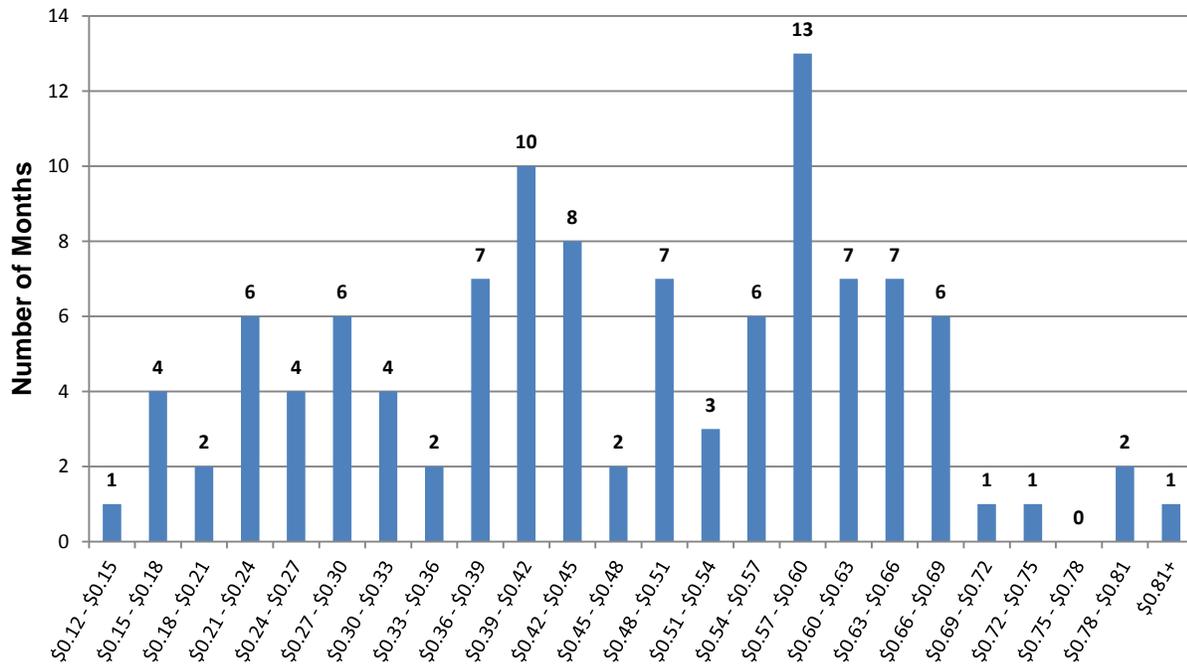
Similar to the June 3, 2015 hearing, the Panel continues to believe that each of the two proposals cannot be accepted and implemented as proposed. The processor whey scale, based on WPC34, continues to have merit, but would require further vetting outside the hearing process. The producer dry whey scale maintains a strict price alignment approach to establishing a whey value similar to the federal order whey value, which the Panel believes is not appropriate. However, there are aspects of each proposal that can be used to modify the current, permanent dry whey scale. To better balance the needs of producers and processors, the Panel recommends modifying the steps, cap and floor, and the values of the permanent dry whey scale. For reasons described in the June 3, 2015 Panel Report and reemphasized in the following discussion, the Panel continues to recommend the same dry whey scale that was recommended as a result of the June 3, 2015 hearing.

Compared to the permanent whey scale, both proposals suggested increasing the number of steps of their respective scales. Increasing the number of steps of the scales would allow the corresponding whey values generated by the scales to be more responsive to changes in the commodity markets. The Panel once again analyzed multiple options for increasing the number of steps in the dry whey scale, but the one option that seems most appropriate was a dry whey scale based on three-cent steps.

*Figure 4* shows the distribution of monthly dry whey prices from January 2007 through February 2016. The majority of the monthly prices during this time period (76 out of 110) continue fall in the steps between \$0.30/lb. and \$0.66/lb., which may indicate the range where future monthly prices may fluctuate over the long term. However, it is difficult to predict where monthly dry whey prices may be at any point in the future, evidenced by the fact that six of out nine monthly prices observed since May 2015 fell below \$0.30/lb. Regardless, the number of historic monthly prices that fall within the three-cent steps in this range appear

somewhat more evenly distributed, compared to the permanent dry whey scale based on five-cent steps, and may allow for a smoother transition between the steps.

**Figure 4: Distribution of Monthly DMN Dry Whey Prices by Specified Ranges, January 2007 - February 2016**



The cap and floor that limit whey values on the upper and lower ends of the scale, respectively, are important. The permanent dry whey scale has a cap and floor, and the two alternative proposals suggest maintaining caps and floors, albeit at different levels. *Figure 4* shows that the monthly dry whey prices below \$0.30/lb. have corresponded to periods of very low milk prices in 2008, 2009, the end of 2015, and the beginning of 2016, when the dry whey market has been at historically low levels. Many of the monthly dry whey prices above \$0.60/lb. correspond to periods of very high milk prices in the years 2007 and 2014. Although monthly dry whey prices have been at the lower end of the spectrum recently, it is less common for monthly dry whey prices to occur at the low and upper end of the spectrum over the long run. Because of this, the Panel believes that the dry whey scale should maintain a cap and floor directed at the low and high prices observed at each end of the spectrum, with a slight modification to the floor. While the cap appears to be appropriate at \$0.60/lb., the floor requires a change from \$0.25/lb. to a different level because the Panel recommends a scale having steps in increments of three cents. The Panel believes a floor placed at a dry whey price below \$0.21/lb. is appropriate.

The final modification to the permanent scale is an adjustment to the level of whey values that correspond to each step. The level of whey values that correspond to the steps must be increased in order to increase the Class 4b price. The Panel examined various scenarios and reviewed the estimated impact of each scenario to the Class 4b price, Pool prices, and the alignment between the Class 4b and FMMO Class III prices. While evaluating the different scenarios, the Panel also took into consideration the many economic factors that influence the establishment of milk prices. After much consideration, the Panel continues to recommend a whey scale that has: a floored whey value of \$0.00/cwt. for dry whey prices below \$0.21/lb.; a

capped whey value of \$1.55/cwt. for dry whey prices above \$0.60/lb.; and whey values ranging from \$0.25/cwt. to \$1.45/cwt. for dry whey prices between the floor and cap. The recommended dry whey scale can be found in the *Summary of Panel Recommendations* section of this Panel Report.

In summary, the Panel believes that increasing the number of steps of the scale should allow for a smoother transition between the steps as the monthly dry whey price moves with the market. Increasing the whey values, as outlined above, will increase the Class 4b price in a manner that may better balance the opposing needs of producers and processors. Maintaining a cap and a floor, with a lower level for the floor, should continue to benefit both producers and processors. The floor would continue to protect producers from any negative whey values that would correspond to very low market prices for dry whey below the floor. Conversely, the cap would continue to protect processors from large, positive whey values that would correspond to very high market prices for dry whey above the cap.

### **Temporary vs. Permanent Price Increase**

The call of this hearing allowed for proposed changes to the valuation of the whey factor on either a temporary or permanent basis. Although there was one witness who supported the continuation of the temporary whey scale for a limited period of one year and four witnesses who advocated for no changes to the Plans, the majority of the witnesses at the hearing advocated for a permanent change to the whey factor by supporting one of the two alternative proposals. In general, witnesses seemed to support permanent changes to the Plans in order to respond to the changing milk production and dairy product manufacturing and marketing conditions observed in California.

When considering price changes, there should be a sound economic relationship between the production of milk and the marketing conditions of the products manufactured from milk. Such a sound economic relationship is one factor that allows the Department to promote and encourage the intelligent production and orderly marketing of milk products, which is mandated in the Code. The Panel's recommended adjustment to the whey factor is designed to achieve the mandates of the Code and provide an appropriate balance between the opposing needs of the state's varied stakeholders.

However, it is difficult to predict how milk production, dairy product manufacturing, and dairy product marketing conditions may change in the future. Past history and previous hearing records showed that conditions in the industry can be volatile and change both dramatically and rapidly because there are many economic factors that influence the industry. As a result of this volatility, the adequacy and viability of class prices should be monitored. The Panel recognizes that there could be circumstances that could lead to deterioration of the conditions affecting the industry, independent of regulatory adjustments implemented by the Department, which may require further adjustments to the Class 4b price or any of the other class prices. If such a situation were to happen that would require further adjustments, the Department has the ability and authority to respond by calling a subsequent hearing, whether in response to a petition by the industry or on its own motion. Furthermore, both producer and processor witnesses supported permanent adjustments to the whey factor. Since the Department may hold future hearings, if necessary, to respond to changing circumstances in the industry, and since testimony at the hearing from both sides of the industry favored permanent changes to the whey factor, the Panel recommends changing the whey factor on a permanent basis.

## **Panel Recommendation**

The Panel recommends replacing the permanent whey scale with the whey scale on the following page, on a permanent basis.

## SUMMARY OF PANEL RECOMMENDATIONS

Because of the significant issues influencing the production of milk in California, the Panel recommends the following:

- The Panel recommends continuing to use dry whey as the basis of the whey factor.
- The Panel recommends replacing the permanent whey scale with the following whey scale based on dry whey:

<b>Monthly Average Dry Whey Price (\$/lb)</b>	<b>Whey Factor Value (\$/cwt.)</b>
< \$0.21	\$0.0000
≥ \$0.21 and < \$0.24	\$0.2500
≥ \$0.24 and < \$0.27	\$0.3500
≥ \$0.27 and < \$0.30	\$0.4500
≥ \$0.30 and < \$0.33	\$0.5500
≥ \$0.33 and < \$0.36	\$0.6500
≥ \$0.36 and < \$0.39	\$0.7500
≥ \$0.39 and < \$0.42	\$0.8500
≥ \$0.42 and < \$0.45	\$0.9500
≥ \$0.45 and < \$0.48	\$1.0500
≥ \$0.48 and < \$0.51	\$1.1500
≥ \$0.51 and < \$0.54	\$1.2500
≥ \$0.54 and < \$0.57	\$1.3500
≥ \$0.57 and < \$0.60	\$1.4500
≥ \$0.60	\$1.5500

Analyzing the 5-year period from March 2011 to February 2016, the effect of these changes would have resulted in a five-year monthly average increase of \$0.61/cwt. in the Class 4b price and \$0.28/cwt. in the Pool prices.

As outlined in this report, the Panel is still concerned with the difficulties relating to the adjustment of all portions of the Class 4b pricing formula. The Panel is additionally concerned with how the regulated pricing system and all its pricing formulas relate to the factors influencing milk production and the manufacturing and marketing of dairy products. Industry stakeholders have also been concerned about California’s pricing formulas and pricing system. The Panel believes that it is imperative for industry stakeholders and the Department to collaboratively seek solutions to address the issues facing the industry.

This Hearing Panel Report has been prepared and submitted by:

*Original Signed by:*

*Original Signed by:*

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Joe Monson, Senior Agricultural Economist

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Hyrum Eastman, Dairy Economic Advisor

*Original Signed by:*

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Don Shippelhoute, Branch Chief

## ECONOMIC CONSIDERATIONS OF THE PROPOSED CHANGES TO THE PRICING FORMULAS

Each and every public hearing involving the milk pricing formulas can impact the economic interest of dairy producers, producer cooperative organizations, dairy processors, distributors, retailers, and consumers. The careful consideration of each pricing issue and the implementation of appropriate policy require impartial balancing of all interests involved. At the same time, the Panel believes it is important to set as accurate a pricing formula as possible that reflects full consideration of all the key economic factors impacting the California milk market. To achieve this, the Panel considered relevant economic factors, including statutory requirements, for all of the issues covered in the Panel Report, some of which are listed below:

- Milk production costs;
- Milk supply;
- Manufacturing costs;
- Product yields in converting bulk milk into finished products;
- Markets for California commodities;
- Transportation costs;
- Price volatility and lags in the release of different datasets;
- The competitiveness of California commodities compared to other major supply regions;
- The prices received by California processors for their finished commodities;
- The differences in the Pool obligations for processors in the California order and the federal orders;
- The state's processing capacities;
- California's long-term history of milk expansion;
- Greater distance to domestic markets for finished dairy products compared to other regions;
- The relationship of California class prices and federal order class prices;
- The effectiveness of risk management tools;
- The supply/demand forces of the domestic and international markets;
- The reasonableness and economic soundness of market milk prices for all classes, giving consideration to combined income from those classes;
- Whether prices will insure an adequate and continuous supply, in relation to demand, of pure, fresh, wholesome market milk for all purposes, including manufacturing purposes, at prices to consumers which, when considered with relevant economic criteria, are fair and reasonable;
- Whether prices for the various classes of market milk bear a reasonable and sound economic relationship to each other; and
- Whether prices promote, foster and encourage the intelligent production and orderly marketing of milk.

**CALIFORNIA FOOD AND AGRICULTURAL CODE**

When reviewing the codified mandates and directives given to the Secretary by the Code, the Panel believes that the Secretary has been given the mandate to consider any and all economic factors available in order to set minimum prices in California. A review of the language found in Section 62062 and other Code sections support this view. The Panel believes that, as previously quoted, California prices shall be in reasonable and sound economic relationship with the national value of manufactured milk products. As further stated in Section 62062, when establishing prices, the Secretary also “shall take into consideration any relevant economic factors, including, but not limited to” other factors listed in this section. These other factors specifically listed in this section include the reasonable and economic soundness of market milk for all classes while considering the combined income from those classes in relation to the cost of producing milk (Section 62062(a)), the establishment of prices that ensure an adequate and continuous supply of milk in relation to the demand for milk for all purposes including consumer prices that are fair and reasonable when considering relevant economic criteria (Section 62062(b)), and the establishment of prices for the various classes of milk that bear a reasonable and sound economic relationship to each other (Section 62062(c)).

Furthermore, when establishing the appropriate level of prices in California, Section 62062 provides the Secretary with further directives and mandates. At the end of Section 62062, there is language stating that, “In establishing the prices, the director shall also take into consideration all the purposes, policies, and standards contained in Sections 61801, 61802, 61805, 61806, 61807, 62076, and 62077.” These sections provide further mandates to insure an adequate and continuous supply of market milk for consumption, develop and maintain satisfactory marketing conditions, and other high-level mandates affecting the state in the aggregate.

Sections 61801 and 61802 provide a mandate that states that the production of milk is a business affected with a public interest, that milk is a necessary food for human consumption, and that health regulations alone are not sufficient to prevent economic disturbances in the production of milk; therefore, as stated in Section 61802(e), “It is the policy of this state to promote, foster, and encourage the intelligent production and orderly marketing of commodities necessary to its citizens, including market milk, and to eliminate economic waste, destructive trade practices, and improper accounting for market milk purchased from producers.” Section 61805 states that the Secretary should determine prices based on varying factors like the cost to produce milk, health regulations, transportation, and other factors, and with the aid of the state, should enable the dairy industry to develop and maintain satisfactory marketing conditions while bringing about and maintaining a reasonable amount of stability and prosperity in milk production. These three sections provide the Secretary with (1) the authority and (2) the overarching mandate to promote overall stability in the marketplace by ensuring the intelligent production of milk at the farm level and a corresponding orderly marketing of dairy products made from farm milk.

Sections 61806 and 61807 seem to provide the Secretary with broad power in setting prices and the mandate to facilitate the state’s milk supply. Section 61806 states that, “It is the intent of the Legislature that the power conferred in this chapter shall be liberally construed.” Section 61806 is found in Chapter 2, Part 3, Division 21 of the Code along with Section 62062 and other sections of the Code mentioned above, which indicates that the Secretary

has been given liberal authority in establishing prices. Section 61807 states that prices should be established that, “under the varying conditions of production, ensure an adequate and continuous supply of pure, fresh, wholesome market milk to consumers of the market milk.” This indicates that prices should be set at levels that will allow for an adequate amount of milk to meet the needs of consumers of market milk.

Sections 62076 and 62077 provide factors for consideration in establishing prices that are associated with Class 2, 3, 4a and 4b milk and the minimum price laws of California. When establishing prices for Class 2, 3, 4a, and 4b milk, Section 62076 states that the Secretary “shall take into consideration any relevant economic factors” that include, but are not limited to the value of the various products manufactured from milk (Section 62076(a)), the price of other milk used for the same purposes in the respective classes listed above (Section 62076(b)), and the value of manufacturing milk while “giving consideration to any relevant factors including, but not limited to, product prices, product yields, and manufacturing costs of Class 4a or Class 4b” (Section 62076(c)). This section reiterates the concept of considering any relevant economic factors available in order to make appropriate pricing decisions. Additionally, this section mandates the consideration of the prices of the dairy products manufactured in the state along with the value of milk used in the various classes. Section 62077 states that handlers in California shall not pay any producer less than the regulated minimum prices for milk. This section cites current law that handlers must pay at least the regulated minimum price for market milk for the various classes, regardless of the dairy products manufactured from the milk or the Pool status of the handler.

## BRIEF SUMMARY OF TESTIMONY

### **William Schiek, Dairy Institute of California**

- Presented proposal submitted by the Institute
- Producers would not benefit from a regulated price set too high
- Opposed the producer proposal because it would devastate the California cheese industry
- The idea of parity between the Class 4b price and the FMMO Class III price is misguided
- The value of whey should be based on the sale of wet separated whey
- The value established in the Class 4b pricing formula should be a function of the WPC34 price, which is the predominant buying scheme for liquid whey
- Proposed both a floor and ceiling for the whey scale submitted in proposal
- Code provides mandates regarding the role of government in setting milk prices
- DMN reported milk sales under regulated prices in 2015 and 2016
- Milk value should be based on the location of production, transportation costs to market dairy products, and the availability of processing capacity
- There are many difficulties in using whey to price milk in cheese making

### **Annie AcMoody, Western United Dairymen**

- Presented joint producer proposal submitted by CDC, MPC, and WUD
- Whey value in the Class 4b pricing formula should mirror the whey value in the FMMO Class III pricing formula
- Using the FMMO whey scale would make it easier for producers to manage risk through hedging
- Feed cost as a percent of total cost of production has increased
- California has had 15 consecutive months of production declines
- California has been losing dairies, milk cows, and milk production
- Plant capacity has not been a concern in the current market
- Drought has continued to plague producers
- Opposed the proposal submitted by the Institute

### **Barry Murphy, Bestwhey LLC**

- Supported the proposal submitted by the Institute
- Whey value should be based on wet whey
- Producer proposal would increase milk prices too much
- Plants operating in federal order systems may buy milk below regulated prices
- Cooperatives may assess their members, but private cheese companies can not
- Opposed the producer proposal

**Eric Erba, California Dairies, Inc.**

- Supported proposal submitted by CDC, MPC, and WUD
- Class 4b price should track FMMO Class III price
- Drought has continued to impact dairy farms
- CDI has started contracting for shorter periods of time due to the uncertainty of its members' milk production
- Opposed the processor proposal

**Joe E. Paris, Gallo Cattle Company**

- Gallo buys wet whey for further processing
- Without allowing for profit, there would be no investment in cheese manufacturing
- Gallo cannot avoid minimum prices like their competitors operating in federal orders
- Supported a cap to protect handlers from high prices
- Prices should be driven by wet whey
- Opposed the producer proposal
- Supported the principles of the proposal submitted by the Institute

**Edward Eddinger, Alouette Cheese USA**

- Opposed the producer proposal
- Whey has not generated a profit for Alouette, costs about \$250,000 per year to dispose of its whey stream
- Supported the continuation of the temporary whey scale for another twelve months

**Greg Dryer, Saputo Cheese USA, Inc.**

- Supported proposal submitted by the Institute
- Opposed extending the temporary whey table
- Dairy price recession is a worldwide problem
- Whey is a cost to most plants, not a profit center
- Assumptions in the FMMO Class III pricing formula have been flawed, and should not be used in California
- Dry whey is not a good barometer of value to cheese makers
- Wet whey correlates to NFDM much better than dry whey
- California has unique costs, larger farms and processing plants, and requires unique pricing consideration

**Elvin Hollon, Dairy Farmers of America, Inc.**

- Supported the producer proposal
- California should align the Class 4b price with the FMMO Class III price
- California has had lower producer pay prices than other regions of the U.S.
- California milk production has been decreasing
- Plant investment has occurred outside of California in areas with higher producer pay prices and increasing milk supplies

- California's Central Valley has favorable cost of doing business conditions
- Opposed the processor proposal

**Eileen De Raadt, Dairy Producer**

- Younger generation wants industry to thrive
- Producers should be fairly compensated
- Supported the producer proposal

**Lucas Deniz, Dairy Producer**

- Supported the producer proposal
- Producers need cheese processors and processors need producers
- Low prices have harmed producers
- The impact of a price increase to processors is unknown

**Richard Denier, Dairy Producer**

- Dairy operation has been losing a lot of money
- Large processors in the state have been highly profitable
- Supported the producer proposal

**Tom Barcellos, Dairy Producer**

- Supported the producer proposal
- Minimum wages are going up, resulting in an increase to the cost of production
- Has witnessed long time producers selling their operations
- Drought is still an issue for producers

**Emily Rooney, Agricultural Council of California**

- Impact of drought has continued to linger
- Supported the producer proposal
- California Class 4b pricing formula should be aligned with the FMMO Class III pricing formula

**Pete Verburg, Dairy Producer**

- Supported the producer proposal
- Long time dairy producer neighbors are leaving the business
- Dairy facilities are being converted into almond orchards
- Banks will not continue to extend credit to producers as long as they did in 2009

**Leonard Vandenburg, Pacific Gold Milk Products**

- Opposed any increase to class prices
- Major cooperatives have failed their producers
- California's milk pooling system is broken
- Operation has lost money on most of its whey steam

**James De Jong, Hilmar Cheese Company, Inc.**

- Supported proposal submitted by the Institute
- Producer proposal overvalues whey
- Minimum prices are needed to clear the market
- California system needs reform
- Prices should provide processors with a reasonable return on investment
- The FMMO Class III formula is flawed
- Competitors may buy milk below minimum federal order prices
- Hilmar's plant in Dalhart, Texas is located in a federal order marketing area, and has purchased milk below the minimum FMMO Class III price
- Hilmar's plant in Dalhart, Texas has been able to receive higher prices for cheese because it is located closer to markets on the East Coast
- There is a bigger risk in setting minimum prices too high than too low

**Lynne McBride, California Dairy Campaign**

- Supported the producer proposal
- California milk production has continued to decrease and dairies continue to close
- Most of the dairy cows being sold in California have been leaving the state
- California Class 4b formula should closely reflect the FMMO Class III price
- Opposed the processor proposal

**Mac Moore, Cacique, Inc.**

- Out-of-state competitors have ability to pay below the FMMO Class III price
- For small cheese plants, disposing of whey is a cost
- Supported going back to the permanent whey scale

**Pete Garbani, Land O'Lakes, Inc.**

- Supported the proposal submitted by CDC, MPC, and WUD
- Incorporating a sliding whey scale in the Class 4b formula has merit
- California milk production has been dropping
- Producer income over feed cost has been dropping
- Lenders have been pressuring some producers to liquidate
- Concerned with using WPC34 to determine the whey value
- Opposed proposal submitted by the Institute

**Joe E. Paris, Rizo Lopez Foods, Inc.**

- Built a new cheese plant in 2012
- Supported going back to the permanent whey scale
- Price increases are difficult to pass on to customers

**Scott Hofferber, Farmdale Creamery, Inc.**

- Invested in a WPC80 processing plant

- WPC80 prices have dropped since investment, causing operation to lose money
- Supported letting the temporary whey scale lapse and going back to the permanent whey scale
- If a change were to be made, argued that the proposal submitted by the Institute was the best approach

### **Sue Taylor, Leprino Foods Company**

- Supported proposal submitted by the Institute
- Plants buying wet whey for full processing commonly pay a price based on the WPC34 price
- Producer proposal ignores differences between California and federal order milk pricing systems
- Global price decreases are impacting exports
- Whey processing is capital intensive
- Prior to 2007, the whey factor in the California Class 4b formula contributed to the closure or sale of multiple cheese plants in the state
- Producer proposal would result in higher Class 4b prices than the formula used prior to 2007
- Current Class 4b pricing formula overvalues cheese

### **Rob Vandenhuevel, Milk Producers Council**

- California producers are losing money and are disadvantaged compared to producers operating outside of California who receive higher mailbox prices
- California has witnessed 15 months of decreased production
- California is losing production while the rest of the nation is increasing production
- Supported the producer proposal
- Questioned the use of WPC34 as a commodity price used to determine the whey factor in the Class 4b pricing formula